

INFORMATION DISCLOSURE STATEMENT

ATTY. DOCKET NUMBER SHA-0003 SERIAL NUMBER 10/650,366 FILED 8-27-2003
FIRST INVENTOR: David N. Shaw TITLE BOOSTED AIR SOURCE HEAT PUMP

EXAMINER NYA

ART UNIT 3744

1. ☒ Applicant submits herewith a copy of (a) attached form PTO-1449, which lists all patents, publications, applications, or other information submitted for consideration by the Office; (b) a legible copy of each document required by 37 C.F.R. §1.98(b)(2).
2. ☐ Applicant herein apprises the Patent Office of references cited in a parent U.S. application from which this application obtains the benefit of an earlier filing date under 35 U.S.C. §120. The Serial Number of the parent application is U.S. Application _____ and entitled _____.
The publications cited therein are listed on attached Form PTO-1449. In accordance with 37 C.F.R. §1.98(d) copies of the listed publications are not required. ☐ Additional parent patent applications are listed on an attached sheet.
3. ☒ In accordance with 37 C.F.R. §1.98(a)(3), Applicant hereby certifies that for each reference not in English (check at least one box below):
☐ A copy of a translation of one or more non-English document, or portion thereof, is provided herewith;
☒ A concise explanation is (check at least one box below):
☐ provided in the accompanying foreign or international search report; ☐ incorporated into the specification; and/or ☒ provided herewith.

37 C.F.R. §1.97(b)(1), (b)(2) – WITHIN 3 MONTHS OF FILING OR ENTRY IN NATIONAL STAGE

4. ☐ Since this Information Disclosure Statement is being filed within three months of the filing date of the subject application or within three months of the date of entry of the national stage as set forth in 37 C.F.R. §1.491 in an international application, no fee or certification under 37 C.F.R. §1.97(e) is required.

37 C.F.R. §1.97(b)(3), (b)(4) – PRIOR TO MAILING OF FIRST OFFICE ACTION OR FIRST ACTION AFTER REQUEST FOR CONTINUED EXAMINATION

5. ☒ Since this Information Disclosure Statement is being filed before the mailing date of the first Office Action on the merits, or before the mailing of a first Office action after the filing of a request for continued examination under 37 C.F.R. §1.114, no fee or certification under 37 C.F.R. §1.97(e) is required.

37 C.F.R. §1.97(c) – AFTER FIRST ACTION, BEFORE FINAL ACTION OR ALLOWANCE

6. ☐ Since this Information Disclosure Statement is being filed outside of the period provided for in 37 C.F.R. §1.97(b), but before the mailing date of a Final Rejection or Notice of Allowance, this submission is being accompanied by (one of the following boxes must be checked):
 - a. ☐ the fee required under 37 C.F.R. §1.97(c)(2) and specified in 37 C.F.R. §1.17(p).
 - b. ☐ the statement specified in 37 C.F.R. §1.97(e) (Box 8 or 9 must be checked).

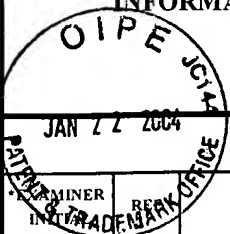
37 C.F.R. §1.97(d) – AFTER FINAL REJECTION OR ALLOWANCE

7. ☐ Since this Information Disclosure Statement is being filed after the period specified in 37 C.F.R. §1.97(c), but on or before payment of the issue fee and is accompanied by both the statement specified in 37 C.F.R. §1.97(e) and the fee set forth in 37 C.F.R. §1.17(p). (Box 8 or 9 must be checked.)
8. ☐ In accordance with 37 C.F.R. §1.97(e)(1), Applicant's attorney certifies that each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement. ☐ The foreign or international search report(s) is/are enclosed.
9. ☐ In accordance with 37 C.F.R. §1.97(e)(2), Applicant's attorney certifies that no item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing this certification after making reasonable inquiry, no item of information contained in this Information Disclosure Statement was known to any individual designated in 37 C.F.R. §1.56(c) more than three months prior to the filing of the information disclosure statement.
10. ☒ In the event the Commissioner of Patents deems that any additional fee is required under 37 C.F.R. §§ 1.16 or 1.17 in connection with this application, Applicant's attorneys authorize that such fee be charged to Deposit Account No. 06-1130.

11. Consideration of this Information Disclosure Statement is respectfully requested.

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|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------------|-------------------------|
| Name: | <u>Lisa Bongiovi</u> | Registration Number | <u>48,933</u> |
| Signature | <u>[Signature]</u> | Date | <u>January 20, 2004</u> |
| CERTIFICATE OF MAILING OR TRANSMISSION: I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner For Patents, P.O. Box 1450, Alexandria, VA 22313-1450, or [] facsimile transmitted to the U.S. Patent and Trademark Office to Facsimile No. _____ on the date shown below. | | | |
| Name | <u>Tammie Lanthier</u> | | |
| Signature | <u>[Signature]</u> | Date | <u>January 20, 2004</u> |



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|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|------------------------------------------------|
| <div style="text-align: center;"> INFORMATION DISCLOSURE CITATION <i>(Use several sheets if necessary)</i> </div> <div style="text-align: center; margin-top: 20px;">  </div> | Docket Number (Optional) SHA-0003 | Application Number 10/650,366 |
| | Applicant(s) David N. Shaw, et al. | |
| | Filing Date 8-27-2003 | Group Art Unit 3744 |

| U.S. PATENT DOCUMENTS | | | | | | | |
|-----------------------|-----|-----------------|------------|-----------------|-------|----------|-------------------------------|
| EXAMINER INITIALS | REF | DOCUMENT NUMBER | DATE | NAME | CLASS | SUBCLASS | FILING DATE IF APPROPRIATE |
| | | 2,243,541 | 5-27-1941 | R . H. Swart | | | |
| | | 2,352,581 | 6-27-1944 | J. F. Winkler | | | |
| | | 2,646,212 | 7-21-1953 | E. P. Kellie | | | |
| | | 2,663,164 | 12-22-1953 | L. M. Kurtz | | | |
| | | 2,938,361 | 5-31-1960 | R. D. McNatt | | | |
| | | 3,074,249 | 1-22-1963 | R. M. Henderson | | | |
| | | 3,226,949 | 1-4-1966 | E. A. Gamache | | | |
| | | 3,377,816 | 4-16-1968 | Isaac Berger | | | |
| | | 3,500,962 | 3-17-1970 | E. J. Kocher | | | |
| | | 3,719,057 | 3-6-1973 | Grant | | | |
| | | 3,775,995 | 12-4-1973 | Conley, et al. | | | |

| FOREIGN PATENT DOCUMENTS | | | | | | | | |
|--------------------------|-----|-----------------|------|---------|-------|----------|-------------|----|
| | REF | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUBCLASS | Translation | |
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| OTHER DOCUMENTS <i>(Including Author, Title, Date, Pertinent Pages, Etc.)</i> | | |
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EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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| INFORMATION DISCLOSURE CITATION <i>(Use several sheets if necessary)</i> | | | | ATTY DOCKET NO. SHA-0003 | | SERIAL NO. 10/650,366 | |
| | | | | David N. Shaw, et al. | | | |
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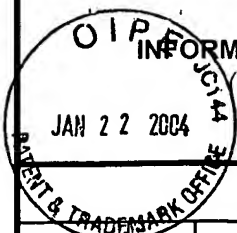
| U.S. PATENT DOCUMENTS | | | | | | | |
|-----------------------|-----------------|------------|-------------------|-------|----------|-------------------------------|--|
| *EXAMINER INITIAL | DOCUMENT NUMBER | DATE | NAME | CLASS | SUBCLASS | FILING DATE IF APPROPRIATE | |
| | 4,753,083 | 6-28-1988 | Sato | | | | |
| | 4,787,211 | 11-29-1988 | Shaw | | | | |
| | 4,833,893 | 5-30-1989 | Morita | | | | |
| | 4,947,655 | 8-14-1990 | Shaw | | | | |
| | 5,062,274 | 11-5-1991 | Shaw | | | | |
| | 5,094,085 | 3-10-1992 | Irino | | | | |
| | 5,095,712 | 3-17-1992 | Narreau | | | | |
| | 5,123,254 | 6-23-1992 | Inoue, et al. | | | | |
| | 5,191,776 | 3-9-1993 | Severance, et al. | | | | |
| | 5,220,806 | 6-22-1993 | Jaster, et al. | | | | |
| | 5,236,311 | 8-17-1993 | Lindstrom | | | | |

| FOREIGN PATENT DOCUMENTS | | | | | | | | |
|--------------------------|------|---------|-------|----------|-------------|----|--|--|
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U.S. PATENT DOCUMENTS

| *EXAMINER INITIAL | DOCUMENT NUMBER | DATE | NAME | CLASS | SUBCLASS | FILING DATE IF APPROPRIATE |
|----------------------|-----------------|------------|-----------------|-------|----------|-------------------------------|
| | 5,303,561 | 4-19-1994 | Bahel, et al. | | | |
| | 5,410,889 | 5-2-1995 | Sjoholm, et al. | | | |
| | 5,626,027 | 5-6-1997 | Dormer, et al. | | | |
| | 5,657,637 | 8-19-1997 | Mertens | | | |
| | 5,839,886 | 11-24-1998 | Shaw | | | |
| | 5,894,739 | 4-20-1999 | Temos | | | |
| | 5,927,088 | 7-27-1999 | Shaw | | | |
| | 6,276,148 B1 | 8-21-2001 | Shaw | | | |
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FOREIGN PATENT DOCUMENTS

| | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUBCLASS | TRANSLATION | |
|--|-----------------|-----------|---------|-------|----------|-------------|----|
| | | | | | | YES | NO |
| | 0 106 414 | 4-25-1984 | EUROPE | | | | |
| | 0 715 077 A2 | 6-5-1996 | EUROPE | | | | |
| | 6-213170 | 8-2-1994 | JAPAN | | | | |
| | WO 97/32168 | 9-4-1997 | PCT | | | | |
| | | | | | | | |

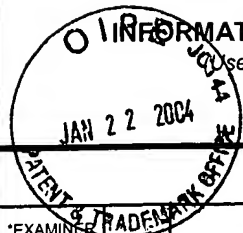
OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

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|--|--|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | Second Edition - "APPLICATIONS OF THERMODYNAMICS"; Author: Bernard D. Wood; 1982 by Bernard D. Wood; 1991 reissued by Waveland Press, Inc.; Pgs. 218-222 |
| | | A Technical Handbook from SWEP; "Compact Brazed Heat Exchangers For Refrigerant Applications"; 1993; 1 page plus cover and back sheets |

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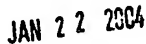
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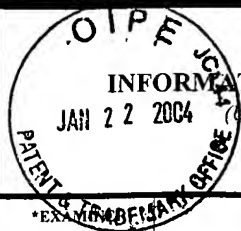
| | | | |
|--|--|--|-------------------------------------------------------------------------------------------------------------------------------------------|
| | | | "Modern Refrigerating Machines"; Author: I. Cerepnalkovski; Elsevier Science Publishers; 1991; Pgs. 47-48 |
| | | | "REFRIGERATION PRINCIPLES AND SYSTEMS - An Engery Approach"; Author: Edward G. Pita; Business News Publishing Company; 1991; Pgs. 243-245 |

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INFORMATION DISCLOSURE CITATION

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Docket Number (Optional)

SHA-0003

Application Number

10/650,366

Applicant(s)

David N. Shaw, et al.

Filing Date

8-27-2003

Group Art Unit

3744

*EXAMINER'S INITIALS

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

INITIAL

"Thermal Environmental Engineering - Second Edition"; Author: James L. Threlkeld; Prentice-Hall, Inc.; 1970, 1962; Pgs. 61-70

"Theory of Mechanical Refrigeration"; Author: N.R. Sparks; McGraw-Hill Book Company, Inc.; 1938; Pgs. 111-127

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